EXHIBIT D

120 FERC ¶ 61,085
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Amaranth Advisors L.L.C.
Amaranth LLC
Amaranth Management Limited Partnership
Amaranth International Limited
Amaranth Partners LLC
Amaranth Capital Partners LLC
Amaranth Group Inc.
Amaranth Advisors (Calgary) ULC
Brian Hunter
Matthew Donohoe

Docket No. IN07-26-000

ORDER TO SHOW CAUSE AND NOTICE OF PROPOSED PENALTIES

(Issued July 26, 2007)

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1. Pursuant to section 385.209(a)(2) of the Commission's regulations[1] and the Commission's *Statement of Administrative Policy Regarding the Process for Assessing Civil Penalties*,[2] the Commission directs the above-captioned firms (collectively, the Amaranth Entities) and former Amaranth Entities' employees Brian Hunter and Matthew Donohoe (collectively, along with the Amaranth Entities, the Respondents) to show cause why they have not violated section 1c.1 of our regulations,[3] which prohibits the manipulation of natural gas prices. We further direct the Respondents to show cause why they should not be assessed civil penalties for, and required to disgorge unjust profits plus

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[1] 18 C.F.R. § 385.209(a)(2) (2006).

[2] *See Statement of Administrative Policy Regarding the Process for Assessing Civil Penalties*, 117 FERC ¶ 61,317, at P 7 (2006).

[3] 18 C.F.R. §1c.1 (2006) (Anti-Manipulation Rule).

interest from, these violations of almost $300,000,000 (in total). We direct the Respondents to file with the Commission such answers within 30 days of the date of this order.

2. This case concerns the important nexus between the wholesale interstate natural gas markets subject to our jurisdiction and the New York Mercantile Exchange (NYMEX) Natural Gas Futures Contract (the NG Futures Contract). In recent years, many market participants in the physical natural gas markets have used the NG Futures Contract as a significant benchmark for prices in physical natural gas. In this case, manipulation of Commission-jurisdictional prices resulted from manipulation of the NG Futures Contract.

3. In the wake of the manipulation of prices in western energy markets during 2000-01, Congress expanded our anti-manipulation authority with the enactment of the Energy Policy Act of 2005 (EPAct 2005).[4] It empowered us to prohibit manipulation, not only by direct participants in the physical natural gas (or wholesale electric) markets, but also where, as here, "any entity" commits manipulation directly or indirectly, in connection with jurisdictional transactions.[5] Moreover, recognizing the increasing importance of deterring misconduct to protect the competitiveness of energy markets, Congress substantially increased through EPAct 2005 the remedies available to us to punish and deter violations of Commission regulations, orders, rules or policies, including increased civil penalties of up to $1,000,000 per violation, per day.[6]

4. This case presents evidence of serious wrongdoing in violation of the new anti-manipulation proscriptions. The Respondents received multiple opportunities to present evidence and argument prior to the issuance of this order, both orally and in writing. The Commission is nevertheless preliminarily of the view that Respondents violated the Commission's regulation as set forth in this order. The Respondents are now provided with another chance to respond.[7] Should any such responses fail to address fully the case

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[4] EPAct 2005, Pub. L. No. 109-58, § 315 (2005) (codified at 15 U.S.C. 717c-1).

[5] *Id.*

[6] EPAct 2005, Pub. L. No. 109-58, § 314(b) (2005) (codified at 15 U.S.C. 717t-1).

[7] Under the applicable rule, 18 C.F.R. § 385.213(c) (2006), Respondents must file answers that provide a clear and concise statement regarding any disputed factual issues and any law upon which they rely. Respondents must also, to the extent practicable, admit or deny, specifically and in detail, each material allegation of this order and set forth every defense relied upon. Upon receipt of Respondents' answers, the Commission

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presented here, the matter will present an appropriate occasion for the first exercise of our expanded substantive regulatory authority, as well as a substantial exercise of our expanded remedial authority.

5. In this case, we preliminarily conclude that the Respondents manipulated the price of Commission-jurisdictional transactions by trading in the NG Futures Contract on February 24, March 29, and April 26, 2006, which trading was designed to produce, and in fact produced, artificial "settlement prices" (discussed more fully below) for these contracts. The evidence of the manipulation is strikingly clear. As discussed in detail *infra*, the Respondents manipulated the final, or "settlement," price of the NG Futures Contract on the above dates by selling an extraordinary amount of these contracts during the last thirty minutes of trading before these futures contracts expired. Respondents did so with the purpose and effect of driving down the settlement price. Considered in isolation, this trading would be economically irrational because by driving down the settlement price, Amaranth made less on the sales of these contracts. However, Amaranth had previously taken positions several times *larger* in various financial derivatives whose value *increased* as a direct result of the decrease in the settlement price of the NG Futures Contract. Thus, for every dollar lost on its sales of the NG Futures Contract, it would gain several dollars on its derivative financial positions. The motive for Amaranth's manipulative scheme thus supplied, Respondent Hunter (Amaranth's head energy trader) observed that he just needed the NG Futures Contract settlement price to "get smashed on settle" as he put it in one of many "instant messages" or IMs revealed in staff's investigation.[8]

6. Moreover, Amaranth and its traders Hunter and Donohoe intentionally manipulated the settlement price of the NG Futures Contract knowing that the NG Futures Contract settlement price is explicitly used to price a substantial volume of Commission-jurisdictional natural gas transactions (namely, "physical basis" transactions, described below, and the various monthly indices that are calculated using physical basis transactions). As Amaranth has acknowledged, the "public relies on [the settlement price of the NG Futures Contract] as a key price benchmark for physical and financial contracts involving natural gas" and that the manipulation of this price can harm

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has many options as to how to proceed. It may issue an order on the merits, request briefs or set specified issues for a trial-type hearing, with full discovery, before an administrative law judge (ALJ), request a recommendation or report from an ALJ, or provide for any other process that would justly and efficiently resolve the matter.

[8] AALLC_REG0684186 (Instant Message from Hunter to Amaranth trader Matthew Calhoun, February 24, 2006).

"all natural gas market participants, including consumers whose cost of natural gas most certainly [is] tied" to the settlement price.[9] Accordingly, the Respondents intentionally or recklessly manipulated prices in connection with Commission-jurisdictional transactions, and thus violated the Commission's Anti-Manipulation Rule.

7. Amaranth's manipulative scheme began, as Hunter stated in another IM, as "a bit of an expiriment [sic]"[10] devised by Hunter on or before February 23, 2006, the day before the first manipulation occurred. The February 24 "experiment" was repeated and refined on March 29 and April 26. Ultimately, and notoriously, Amaranth experienced massive trading losses in the fall of 2006 and ceased investment operations. While related to Amaranth's overall natural gas portfolio, that failure is not directly tied to the manipulations and, as discussed more fully *infra*, this matter was initiated by Commission staff on a non-public basis well before those losses and collapse.

8. By granting the Commission enhanced civil penalty and anti-manipulation authority in EPAct 2005, Congress gave us a clear mandate to punish such gaming of the energy markets that are subject to our jurisdiction, particularly where, as here, the manipulation harmed all market participants. Based on all the facts and circumstances, including the serious nature of the violations and the absence of any material mitigating factors, we preliminarily conclude that it would be appropriate to order severe civil penalties of $200,000,000 in the case of the Amaranth Entities, $30,000,000 in the case of Hunter, and $2,000,000 in the case of Donohoe, as well as disgorgement of substantial unjust profits from the Amaranth Entities of over $59,000,000 plus interest.

I. BACKGROUND

A. The Relevant Markets

9. The manipulation in this case involves three distinct but interrelated markets: (1) the NG Futures Contract market, which contracts are traded exclusively on NYMEX; (2) a variety of "derivative" financial products, most of which are termed "swaps" (some traded on NYMEX, some "over the counter" (*e.g.*, on Intercontinental Exchange, Inc. (ICE)), and all of which derive their value based on the "settlement price" of the NG Futures Contract for a given month; and (3) Commission-jurisdictional wholesale natural

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[9] AMARANTH_REG_054783-84 (Letter from Amaranth to NYMEX, August 30, 2006).

[10] AALLC_REG0684227 (Instant Message from Hunter to "gloverb", February 24, 2006). Hereinafter, "expiriment" will generally be correctly spelled as "experiment."

gas sales, namely, wholesale natural gas sales in interstate commerce that are not "first sales" within the meaning of the Natural Gas Policy Act of 1978 (NGPA).[11] The first market affects the second and third inasmuch as the NG Futures Contract settlement price determines, in whole or in part, the value of the derivatives and the price of a substantial volume of Commission-jurisdictional wholesale natural gas sales.

1. The NG Futures Contract

10. The NG Futures Contract is a contract for the future delivery of 10,000 MMBtu of natural gas over the course of the contract month to the buyer's interconnection on the Sabine Pipe Line Co.'s Henry Hub in Louisiana.[12] The NG Futures Contract market provides important benefits to the physical natural gas markets. Highly liquid trading of the NG Futures Contract is driven by sophisticated participants who study the fundamentals that affect future natural gas prices such as weather, storage, injections, withdrawals, production and the like. Tens of thousands of prompt-month contracts are traded on a daily basis, with trading volume increasing as the time to maturity decreases. As a result, many market participants view NG Futures Contract pricing as a reliable price signal for the purpose of transacting or planning for natural gas sales. The market also allows physical natural gas market participants to hedge against risks of future price volatility on their fixed contract obligations.

a. Trading in the NG Futures Contract

11. During the relevant time period (early 2006), the NG Futures Contract was principally traded in an "open outcry" market on the NYMEX trading floor located in the financial district in New York, New York. It is an open and continuous auction by NYMEX members who are acting on behalf of their customers, the brokerage companies they represent, or themselves.[13] It is referred to as "open outcry" because, instead of a

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[11] 15 U.S.C. § 3431(a) (2000).

[12] *See* NYMEX Exchange Rulebook §§ 220.05, 220.10-12 ("Natural Gas Futures Contract"), *available at* http://www.nymex.com/rule_main.aspx?pg=33.

[13] The following description of NYMEX floor trading is based largely on the summary provided on the NYMEX website: http://www.nymex.com/how_exchang_works.aspx. Electronic trading on the NYMEX is currently eclipsing trading in the open outcry pit; in January 2007, NYMEX volume on the CME Globex electronic trading platform for the first quarter 2007 was 597,000 contracts per day, while the NYMEX floor-traded average daily volume was 330,000 contracts per day. NYMEX, *NYMEX Reports Record First Quarter 2007 Volume of*

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single auctioneer selling an item, every member on the floor can shout out bids (*i.e.*, prices at which they are willing to buy a contract) or offers (*i.e.*, the prices at which they wish to sell a contract), in what may appear to be a somewhat chaotic and disorganized process. At some times, there may be one hundred or more traders on the floor or "pit," yelling and gesturing all at the same time as they struggle to find counterparties and fulfill their client's orders.

12. In fact, the seemingly chaotic NYMEX "pit" is an efficient market clearing environment. The NYMEX floor traders, normally wearing jackets with distinctive colors to identify themselves or the brokerage company for which they work, stand in the trading rings or pits on the trading floor, which are arranged like little amphitheaters with wide steps descending to the center. Brokers' phone clerks, who are outside the trading pit area, take orders from customers and typically record those orders on small slips of paper, noting the volume of the order, the terms requested and any other information pertinent to the execution of the order. Another broker employee may physically deliver the orders to the floor traders in the ring, or the orders may be verbally transmitted to the floor broker. Floor traders who wish to accept a bid or offer do so by shouting at and gesturing (using well known pit gestures) to the trader making the bid or offer. Experienced traders can detect in real time the status and direction of pricing and volumes by visually and audibly monitoring the trading behavior of other brokers in the ring. Importantly, for purposes of this case, and as discussed more fully below, when a floor broker with a large order to sell begins to offer to sell contracts serially and in rapid succession, and other brokers quickly accept or "lift" the offers, experienced brokers who may have orders to buy will perceive the intentions of the large seller. Rather than bidding at prevailing prices and having sellers "hit" their bids, they will wait for the large seller to offer at a lower price and then "lift" those offers at such lower prices. In such a manner, the large seller can (intentionally or unintentionally) move the prevailing prices in the ring in a downward direction.

13. When a trade is executed, each selling broker must record each transaction on a card about the size of an index card which shows the commodity, quantity, delivery month, price, broker's badge name and badge name of the buyer. The pit card must be tossed (physically) into the center of the trading ring within one minute of the completion of a transaction. A NYMEX employee sits in the center of the trading ring, collects and time-stamps the cards, and the data on the card is then entered into a NYMEX central

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1.512 Million Contracts Per Day, Up 40 Percent From 2006 Period; Record March Volume Averaged 1.372 Million Contracts Per Day (Apr. 3, 2007), http://investor.nymex.com/releasedetail.cfm?ReleaseID=236556.

computer system. In addition, most brokers will record the essential terms of the execution on the same slips of paper their firms created with respect to the client orders.

b. NG Futures Contract Settlement Price

14. The NG Futures Contract "settlement price" is the volume-weighted average price of trades made during the 30-minute "settlement period," which is the last 30 minutes of trading on the termination day for the "prompt-month" contract. The "prompt-month" is the next calendar month. The "termination day" for the NG Futures Contract is the third-to-last business day of the month preceding the prompt month, and the settlement period occurs from 2:00 p.m. to 2:30 p.m. on the termination day (except when the NYMEX is operating on a holiday schedule). So, for example, for August 2007, the prompt-month contract is the September 2007 NG Futures Contract. The last business day for August 2007 is Friday, August 31, so the settlement period for the September 2007 NG Futures Contract will take place from 2:00 p.m. to 2:30 p.m. on Wednesday, August 29, 2007.

15. A few futures market participants hold their positions to the end of the settlement period for the prompt-month contract, and thus are obligated to "go to delivery." That is to say, the "futures" contract for the prompt month becomes a present contractual obligation for the purchase and sale of the physical gas. Longs must take delivery and shorts must make delivery of 10,000 MMBtu per contract over the course of the contract month, at the buyer's interconnection on the Sabine Pipe Line Co.'s Henry Hub in Louisiana.[14] As noted above, the price for the gas that goes to delivery is the settlement price of the NG Futures Contract.[15] However, it should be noted that the vast majority of NG Futures Contracts do not in fact go to delivery. For the contract months in question, the height of open interest[16] during the life of the contracts was 103,552 for the March

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[14] *See* NYMEX Exchange Rulebook §§ 220.10-12, *available at* http://www.nymex.com/rule_main.aspx?pg=33.

[15] *See* NYMEX Exchange Rulebook § 220.11(D), *available at* http://www.nymex.com/rule_main.aspx?pg=33.

[16] "Open Interest" is the total number of futures contracts long or short in a delivery month or market that has been entered into and not yet liquidated by an offsetting transaction or fulfilled by delivery. CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_o.htm. Thus, as the clock is winding down during the settlement period, the open interest (both in terms of the total number of contracts and the number of counterparties) is rapidly decreasing, so that a given number of contracts will represent an increasing share of the outstanding prompt-month contracts.

Contract, 82,372 for the April Contract, and 109,265 for the May Contract,[17] while only the following number of contracts went to delivery: 1,697 for March (1.6 percent of largest open interest), 1,230 for April (1.5 percent of largest open interest), and 1,748 for May (1.6 percent of largest open interest).[18]

16. Most market participants prefer to *avoid* trading during the settlement period. As the time to termination is winding down, price risk and volatility may increase, while market liquidity and the remaining open interest are decreasing. Most market participants liquidate or "roll" (meaning that they transfer their position into later contract months) their open long or short positions in the prompt-month NG Futures Contract well before the settlement period. A small number of floor brokers known as "locals"[19] trade on their own account. For locals, these price and liquidation risks are less prominent because they trade in the ring on their own information (as opposed to clients who may be calling in orders). They can perceive the market movements in real time and trade, in the moment, on these market movements, buying and selling in the closing minutes to earn profits here and there on individual trades – and providing liquidity as the contract proceeds to termination.[20] As will be seen *infra*, however, some locals also act as brokers for large institutional clients.

2. NG Futures Contract Settlement Price Effects on Derivatives

17. The NG Futures Contract final settlement price sets, in whole or in part, the settlement price for a wide range of natural gas derivatives, including financially-settled natural gas futures "swaps" and "basis swaps."[21] Certain "options" can also settle on the final NG Futures Contract settlement price.

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[17] NYMEX NG Futures Contract trade data, *available at* FutureSource, NGH06, NGJ06, NGK06, http://www.esignal.com/futuresource.

[18] NYMEX_00031 (NYMEX NG Futures Contract data).

[19] *See* NYMEX Frequently Asked Questions, http://www.nymex.com/faq.aspx.

[20] *See, e.g.* Bolling Dep. 34:18-23 (June 29, 2007).

[21] A "basis swap" is a derivative instrument whose value is based on the difference between the settlement price of the NG Futures Contract for a given contract month and that of the monthly "index" at a specified location for that same month. *See, e.g.*, NYMEX Exchange Rulebook § 521.02 ("NYMEX Transco Zone 6 Basis Swap (Platts IFERC) Contract"):

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18. A natural gas futures "swap" (swap) is a purely financial instrument that operates much like the NG Futures Contract except that, rather than becoming a physical delivery or purchase obligation, it settles financially at the termination of the NG Futures Contract at the NG Futures Contract's final settlement price. Financial swaps do not entail physical delivery risk. The buyer in a swap transaction for a given contract month agrees to pay the seller a "fixed price," *i.e.*, a specific amount determined at the time when the transaction occurs. The seller pays the buyer a "floating price,"[22] which will be the actual final settlement price for the NG Futures Contract and which is not known at the time of the swap transaction. Thus, buyers and sellers hope to profit based on the relation between the price paid at the time of the transaction and the ultimate settlement price of the NG Futures Contract: the buyer of the swap profits if the floating price (*i.e.*, the actual final NG Futures Contract settlement price) is higher than the fixed price at which the swap is trading at the time that the transaction takes place; the seller profits if the floating price is lower than the fixed price.

> The Floating Price for each contract month will be equal to the Platts Inside FERC's Gas Market Report ('Platts IFERC') Transco Zone 6 Index ('Index') published in the table titled 'Market Center Spot-Gas Prices' in the first regular issue of the contract month minus the NYMEX (Henry Hub) Natural Gas Futures contract final settlement price for the corresponding contract month.

available at http://www.nymex.com/rule_main.aspx?pg=90. As discussed in more detail below, a monthly index price is normally calculated based on the volume-weighted average price of fixed-price and/or physical basis transactions executed during "bid week," which is the last five business days of the month.

[22] *See, e.g.*, NYMEX Exchange Rulebook § 508.02 ("Henry Hub Swap Futures Contract") ("The Floating Price [*i.e.*, the final settlement price of the swap] for each contract month will be equal to the NYMEX (Henry Hub) Natural Gas Futures contract final settlement price for the corresponding contract month on the last trading day for that contract month."), *available at* http://www.nymex.com/rule_main.aspx?pg=77. Similarly, for the ICE natural gas swap, the floating price is "the monthly last settlement price for natural gas futures as made public by the New York Mercantile Exchange (NYMEX) for the month of production." ICE, Product Details for Natural Gas Swap, Fixed for NYMEX LD1, *available at* https://www.theice.com/productguide/productDetails.do?productId=53&productTypeId=1093&display=.

19. A natural gas futures "option" is a contract that gives the buyer the right, but not the obligation, to buy or sell a specified quantity of futures for a particular contract month at a specific price within a specified period of time, regardless of the futures market price. If an option is exercised, or "assigned," a futures position is established. Like all futures, a future created from an option can be liquidated by making an offsetting purchase or sale, or can go to delivery. An option can be either a "call" or a "put." The buyer of a natural gas futures "call" option traded on NYMEX has the right, but not the obligation, on the expiration day[23] to purchase one NG Futures Contract at the "strike price," which is a price specified at the time the option is written.[24] Conversely, the seller (or "writer") of the call has the obligation to sell one NG Futures Contract at the strike price to the buyer of the call, in the event the option is exercised. Similarly, the buyer of a "put" option has the right, but not the obligation, on the expiration day to sell one NG Futures Contract at the strike price, while the writer (seller) of the put has an obligation to buy one NG Futures Contract at the strike price from the buyer upon exercise. In either case, the buyer of the put or call makes an initial payment to the writer of the put or call, referred to as the option premium. Traders can also buy and sell options on purely financial contracts, such as swaps. As with the other natural gas derivatives described above, the price of the NG Futures Contract has a direct relationship to the value of options. The NG Futures Contract is a basic component that determines the value of the options. While options on prompt-month futures and other derivatives expire on the day before termination day, trading during the settlement period on termination day continues to affect the value of options on future-month instruments. Trading during the last two minutes on the termination day is particularly important, as options continue to trade at prices in relation to the price of the expiring NG Futures Contract. As discussed more fully below, options and other derivatives are given a non-final settlement price based on trading during these two minutes, which determines the options' marked-to-market[25] value for that day.

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[23] There are various option expiration days, depending on the terms of the particular option instrument in question. This discussion will be limited to the NYMEX natural gas option, which expires the day before the termination day for the NG Futures Contract for that month, *i.e.*, the fourth-to-last business day of the month.

[24] There will normally be a range of strike prices for each put and call of a given contract month, separated by $0.25 or $0.50 intervals. For example, an August call with a strike price of $5 would be identified as simply the August $5 call.

[25] Marked-to-market values represent the gains or losses in each contract position resulting from changes in the price of the futures or option contracts at the end of each

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3. NG Futures Contract Settlement Price Effects on Prices in Commission-Jurisdictional Transactions

20. Importantly, from the perspective of our jurisdiction, the NG Futures Contract settlement price determines the price of a substantial proportion of Commission-jurisdictional transactions, most directly, "physical basis" transactions. A physical basis transaction is a contract for delivery of natural gas at some location in the wholesale natural gas delivery system that spans the nation. The price of a physical basis transaction is the NG Futures Contract settlement price for a given month, plus or minus a fixed amount representing the expected "basis" (or differential for delivery at the delivery location versus Henry Hub) at the time of the transaction.[26] Consequently, any manipulation of the NG Futures Contract settlement price will inevitably result in a penny-for-penny change in the prices used in physical basis transactions.

21. A second, and larger, category of Commission-jurisdictional transactions that rely to a great degree on the NG Futures Contract are "index" transactions. Monthly price indices are compiled and published by several trade press entities (*e.g.*, Platts or NGI) who obtain information provided on a voluntary basis by market participants about trades occurring at various physical natural gas trading locations.[27] Monthly indices are normally calculated based on the volume-weighted average price of fixed-price and/or physical basis transactions executed at such locations during "bid week," which is the last five business days of the month. As such, the NG Futures Contract settlement price is included in the calculation of indices for locations where bid week physical basis trades are reported to publishers.

22. Figure 1 below shows that high percentages of bid week transactions at index points in the East, Mid-Continent, and producing regions along the Gulf coast are physical basis transactions. Consequently, monthly indices at these locations are set primarily by physical basis transactions that explicitly use the NG Futures Contract

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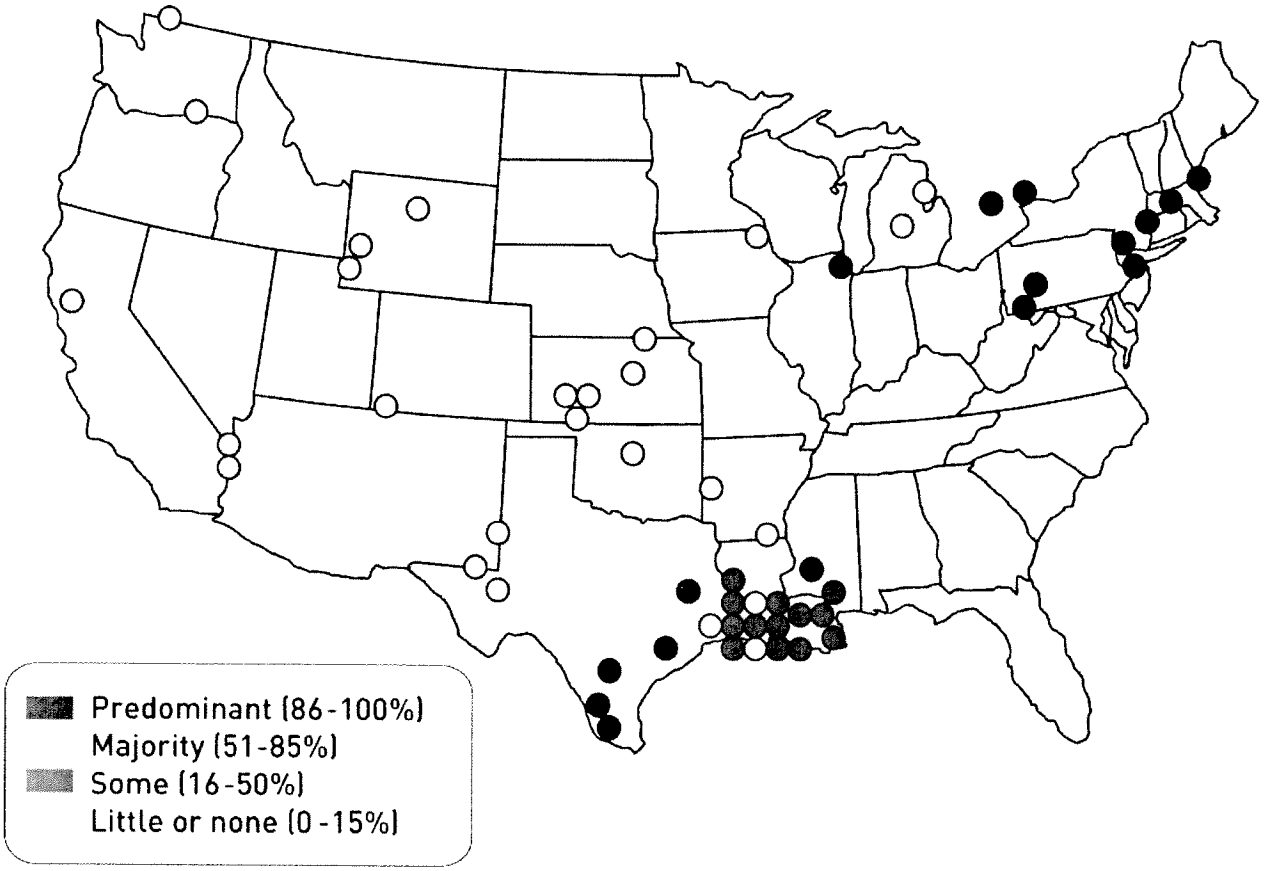
trading session. *See* CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_m.htm.

[26] So for example, if gas for delivery to Transco Zone 6 (*i.e.*, New York) during August 2007 is expected to be $1 greater than gas delivered to Henry Hub for that month, a physical basis trade for the prompt month would be the settlement price of the August 2007 NG Futures Contract settlement price, plus one dollar.

[27] *See generally Policy Statement on Natural Gas and Electric Price Indices*, 104 FERC ¶ 61,121 (2003), *clarification granted*, 105 FERC ¶ 61,282 (2003).

settlement price as a reference price. If the NG Futures Contract settlement price is rendered artificial due to manipulation, this artificial price element will be directly transmitted into index prices to the extent that they are calculated using physical basis transactions.

Figure 1: Use of Physical Basis in Natural Gas Price Indices at Major Trading Points, 2006[28]



23. The price indices that rely heavily on physical basis transactions, in turn, are widely used in bilateral natural gas markets as a price term. According to a report prepared by the American Gas Association (AGA), a trade group for natural gas local distribution companies (LDCs), "it is clear that first-of-the-month index pricing [*i.e.*,

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[28] FERC, *2006 State of the Markets Report* at 50 (2007), *available at* http://www.ferc.gov/market-oversight/st-mkt-ovr/st-mkt-ovr.asp.

monthly indices] dominates the market for long- and mid-term supply agreements." This report surveyed 30 LDCs and made the following findings: (i) for long-term gas purchases (one year or more), 20 of 22 responding companies used monthly indices, with 13 of those companies using monthly indices for 51 to 100 percent of their long-term purchases; (ii) for mid-term purchases (more than one month, less than one year), 24 of 29 respondents used monthly indices, with 15 of those companies using monthly indices for 51 to 100 percent of their purchases; (iii) for short-term purchases (less than one month), 19 of the respondents used monthly indices; and (iv) 26 of 29 respondents used monthly indices to buy gas for storage injection, with 11 of those companies using monthly indices for 76 to 100 percent of their storage gas.[29] The AGA report further found that several of these LDCs used the NYMEX price itself for supply agreements: (i) four of the 22 respondents to this question used NYMEX for long-term supply agreements; (ii) seven of the 29 respondents used NYMEX for mid-term supply agreements, with three of these using it for 76 to 100 percent of their purchases; (iii) seven of the 29 respondents used NYMEX for short-term pricing (less than one month), with five of these using it for 51 to 100 percent of their purchases; and (iv) three of the 29 respondents used NYMEX to buy gas for storage injection.[30]

24. In addition to market participants relying on the NG Futures Contract settlement price, or on indices that substantially report prices based on the settlement price, regulators at the state level sometimes look to index or settlement price-based purchases of natural gas by LDCs in evaluating whether such purchases were prudent. Accordingly, LDCs naturally have increasingly come to rely on such prices in satisfying themselves that their purchases will pass regulatory scrutiny.

25. Jurisdictional sellers of natural gas are not required to report their sales to the Commission. While we have issued a Notice of Proposed Rulemaking to require future annual reporting of aggregate physical natural gas sales,[31] pursuant to the transparency provisions of EPAct 2005,[32] we cannot, nor need we, determine at this time the precise

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[29] AGA, *LDC Supply Portfolio Management During the 2005-2006 Winter Heating Season* at 3-5, 11 (2006).

[30] *Id.* at 11-14, 17.

[31] Notice of Proposed Rulemaking, *Transparency Provisions of Section 23 of the Natural Gas Act; Transparency Provisions of the Energy Policy Act of 2005*, 72 Fed. Reg. 31,217 (June 6, 2007), FERC Stats. & Regs. ¶ 32,614 (2007).

[32] EPAct 2005 § 316 (codified at 15 U.S.C. § 717t-2).

volume or proportion of total "jurisdictional" gas transactions that are priced using physical basis or that are sold at index prices determined, in whole or in part, by physical basis trades. We have a variety of indications that the volume is substantial. For example, as discussed at our October 13, 2006 Technical Conference on Price Transparency, numerous blanket market certificate sellers have notified the Commission that they report their sales to indices, including sellers like BP, ConocoPhillips, Sempra, Coral, and Chevron. Given the proportion of the index transactions that are physical basis, it stands to reason that these jurisdictional sellers are selling a large proportion of physical basis. In addition, monthly wholesale physical gas transactions executed on ICE during 2006 indicate that there were over 747 Bcf of wholesale physical basis transactions during this period. The following volumes of physical basis trades were executed on ICE at major Eastern, Mid-Continent, and Gulf Coast trading hubs: Columbia Gas TCO Pool (Appalachia) – 92.8 Bcf; TETCO-M3 (Eastern Texas) – 76.7 Bcf; Dominion South (Mid-Atlantic) – 76.1 Bcf; Transco Z6 (New York) – 52.9 Bcf; Centerpoint-East (Mid-Continent) – 39.4 Bcf.[33]

26. As noted, an additional category of Commission-jurisdictional transactions whose price is determined by the NG Futures Contract settlement price are those NG Futures Contracts that "go to delivery." During the months of interest, blanket certificate holders such as BP, Louis Dreyfus, UBS, Merrill Lynch, and ConocoPhillips each sold natural gas by taking NG Futures Contracts short through expiration in one or more of the months for a total of over 2,000 contracts for approximately 20 Bcf of physical gas that went to delivery.[34]

27. The natural gas sold as a result of the aforementioned processes represents substantial wholesale sales for resale in interstate commerce that are not first sales. Consequently, they are subject to the Commission's jurisdiction, and manipulation of the NG Futures Contract Settlement price will necessarily change the price in these transactions by corresponding amounts.

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[33] ICE, End of Day Reports – OTC (natural gas firm physical basis swaps), *available at* https://www.theice.com/eod_valuation.jhtml.

[34] NYMEX_00029 (NYMEX open interest, trade, and delivery data).

B. The Respondents

1. The Amaranth Entities

28. The Amaranth Entities collectively comprise what is commonly referred to as a "hedge fund." On paper, they consist of a complex array of interrelated LLCs, LLPs, and corporations,[35] organized for the purpose of pooling and investing funds of investors. They include "Amaranth Advisors L.L.C.," which is the "Advisor" to a number of "Funds," which in turn hold the capital contributed by investors, as discussed more fully *infra*.

29. The principal "Fund" is Amaranth LLC, a Cayman Islands company. Amaranth LLC is a multi-strategy trading fund advised by Amaranth Advisors L.L.C. and its affiliates. Amaranth LLC serves as a "master fund" in a "master-feeder" fund structure. Investors invest directly into three feeder funds (Amaranth International Limited, Amaranth Partners LLC, and Amaranth Capital Partners LLC), which invest substantially all of their capital in Amaranth LLC.[36] Amaranth LLC then invests its funds on a global basis in a host of trading vehicles. Amaranth LLC currently possesses substantial assets related to the operation of the Amaranth Entities.

30. Amaranth Group Inc. is a Delaware S corporation owned 100 percent by Amaranth LLC CEO Nicholas Maounis (Maounis). As of May 1, 2006, Amaranth Group Inc. owned one percent and served as general partner of Amaranth Management Limited Partnership, a Delaware holding entity, which entity in turn owned 78 percent of Amaranth Advisors L.L.C. Amaranth Group Inc. employed all the natural gas traders, including Brian Hunter, Matthew Donohoe, as well as the executives such as the President and Chief Investment Officer (CIO) Maounis, Chief Risk Officer (CRO) Robert Jones, and Chief Compliance Officer (CCO) Michael Carrieri. Amaranth Group Inc. is a service provider to the Amaranth Funds.

31. Amaranth International Limited is a Bermuda company. Amaranth International Limited serves as an off-shore "feeder fund" for non-United States and tax-exempt investors, in the "master-feeder" fund structure. Investors invest directly into Amaranth International Limited, which invests substantially all of its capital in Amaranth LLC.

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[35] AMARANTH_REG000049-61 (thirteen pages of Amaranth Organizational Charts).

[36] AALLC_REG0343320 (Amaranth LLC Financial Profile, January 2006).

32. Amaranth Partners LLC and Amaranth Capital Partners LLC are Delaware Limited Liability Companies. They both serve as a domestic "feeder fund" for United States taxable investors, in the "master-feeder" fund structure. Investors invest directly into these entities, which then invest substantially all of their capital in Amaranth LLC.

33. Amaranth Advisors (Calgary) ULC is a Nova Scotia, Canada company, registered with the Alberta Securities Commission, that Amaranth established as an energy advisor entity to allow Hunter and his team to move their trading operation from Greenwich, Connecticut to Calgary, Alberta (as discussed more fully *infra*). Hunter was the President, though most of the other officers were based in Greenwich, as were the other Amaranth employees assigned to perform support functions for the Calgary trading operation. Amaranth Advisors (Calgary) ULC is an indirect subsidiary of Amaranth Advisors L.L.C.

34. At the close of 2005, the Amaranth Entities employed over 600 people in Amaranth's Greenwich, Connecticut headquarters and seven other offices worldwide and controlled in excess of $8 billion in assets. In September 2006, Amaranth experienced significant losses from its natural gas positions that ultimately resulted in the pending and well-publicized dissolution of the firm.[37] Although Amaranth trading operations ceased in 2006, at present the assets of the Amaranth Entities exceed $600,000,000.[38]

2. The Traders

35. Brian Hunter, a Canadian citizen, was the head natural gas trader at Amaranth, stationed in a Calgary, Alberta office during the period in which the manipulative trading occurred. After holding various energy trading positions at TransCanada and Deutsche Bank, he joined Amaranth as an energy trader in 2004 in Greenwich and became a Portfolio Manager for Energy Trading in 2005. At about the time he joined Amaranth, it seems to have become generally known that he had left Deutsche Bank on unfavorable terms, including being taken off of the trading desk.[39] His troubles with Deutsche Bank

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[37] We note, in passing, that we have found no evidence indicating these fall 2006 losses were connected to Respondents' manipulative trading in the NG Futures Contract in early 2006 and also that staff's monitoring activities and investigation that resulted in this order began well before Amaranth's losses and the publicity, Congressional interest, and private litigation that ensued.

[38] Letter from Maounis to Amaranth Investors (Mar. 29, 2007).

[39] *See* Ann Davis, *How Giant Bets on Natural Gas Sank Brash Hedge-Fund Trader*, WALL ST. J., Sept. 19, 2006, at A1, *available at*

(continued)

eventually erupted publicly with the filing of a lawsuit against the firm blaming alleged performance problems on faulty Deutsche Bank systems and management. He left Amaranth sometime in late 2006 after the losses discussed above.

36. Matthew Donohoe was Hunter's "execution trader" at Amaranth. According to Donohoe, Hunter would "direct macro strategy, and [Donohoe] would implement it via trading."[40] As such, Donohoe would place the orders with NYMEX floor brokers or execute trades with counterparties on behalf of Hunter's trading book. He also left Amaranth after the fall 2006 losses.

3. The Trading Operation

37. Hunter was hired in 2004 by Maounis and Harpreet "Harry" Arora, a former Enron trader who had established Amaranth's energy and commodities trading desk. Hunter apparently grew to dislike reporting to Arora and to resent the way Hunter was compensated by Amaranth.[41] During the summer of 2005, Hunter threatened to leave Amaranth and went so far as to sign a contract with another firm.[42] In order to retain Hunter, Maounis allowed Hunter to manage a trading book separate from Arora's, focused on natural gas futures and derivatives.[43] Maounis also eventually promoted Hunter to Vice President reporting directly to Maounis, made Hunter "co-head" with Arora of commodities trading at Amaranth, and enhanced Hunter's "desk participation" (*i.e.*, his share of his trading desks profits) from 7.5 percent to 15 percent.[44] Hunter

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http://online.wsj.com/article_email/SB115861715980366723-lMyQjAxMDE2NTE4OTYxMTk3Wj.html; *see also* Maounis Dep. 54:9-55:16 (Nov. 20, 2006 late afternoon session); Hunter Dep. 52:9-53:2 (Nov. 16, 2006).

[40] Donohoe Dep. 17:21-18:2 (Mar. 14, 2007 morning session).

[41] Maounis Dep. 14:2-15:3 (Nov. 20, 2006 morning session).

[42] Hunter Dep. 21:5-22:3 (Nov. 16, 2006); Maounis Dep. 26:6-27:20 (Nov. 20, 2006 late afternoon session).

[43] Hunter Dep. 21:5-10, 24:9-22 (Nov. 16, 2006); Maounis Dep. 15:13-16 (Nov. 20, 2006 morning session).

[44] Maounis Dep. 28:4-7 (Nov. 20, 2006 late afternoon session); Arora Dep. 16:21-25 (Nov. 14, 2006 morning session), 33:18-20 (Nov. 14, 2006 afternoon session); A_CFTC000052; *see also* AMARANTH_REG003387-3402 (Letter from Amaranth to Hunter, dated June 1, 2005, summarizing his compensation package).

made roughly $1 billion for Amaranth in 2005, largely from trading around the periods when Hurricanes Katrina and Rita sent natural gas prices soaring, and received total compensation of roughly $100 million.[45] Subsequently, Amaranth allowed Hunter to increase the size of his natural gas positions (so that Amaranth allocated well over *half* of its risk capital to its energy book by the Summer of 2006).[46]

38. On August 23, 2005, shortly after Amaranth allowed Hunter to split his book from Arora's, Amaranth submitted an application to NYMEX for an exemption from NYMEX's position limits for trading in the NG Futures Contract and the Henry Hub Swap Contract (or NN Contract).[47] Specifically, Amaranth requested that its position limits be raised from 1,000 NG Futures Contract equivalents to 3,000 NG Futures Contract equivalents. In its request, Amaranth emphasized the high priority that it placed on risk management and that it had "assigned a risk manager to sit among its energy traders."[48] On September 16, 2005, NYMEX substantially granted Amaranth's exemption request.[49] This exemption, in part, positioned Hunter for the extensive trading in the settlement period that was to come.

39. In late 2005, Amaranth allowed Hunter to move his trading desk to Calgary, his hometown.[50] At first, Hunter was alone in Calgary, though eventually, four other Amaranth natural gas traders migrated there from Greenwich over the course of the Spring and Summer of 2006 (specifically, Matthew Donohoe, Matthew Calhoun, Shane Lee, and Brad Basarowich). Notably absent in Calgary were Amaranth senior

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[45] Maounis Dep. 27:21-24 (Nov. 20, 2006 late afternoon session); Ann Davis, *How Giant Bets on Natural Gas Sank Brash Hedge-Fund Trader*, WALL ST. J., Sept. 19, 2006, at A1, *available at* http://online.wsj.com/article_email/SB115861715980366723-lMyQjAxMDE2NTE4OTYxMTk3Wj.html.

[46] *See, e.g.*, AALLC_REG0767207-28, AALLC_REG0605202, AALLC_REG0550756, AALLC_REG0609346, AALLC_REG0611335 (series of documents Amaranth provided to investors outlining the percentage of risk capital allocated by strategy).

[47] A_CFTC000051-56.

[48] A_CFTC000052-53.

[49] A_CFTC000057.

[50] Maounis Dep. 15:7-17:11 (Nov. 20, 2006 morning session).

management, risk management, or compliance personnel,[51] contrary to the aforementioned representations Amaranth made to the NYMEX to obtain position limit exemptions.

40. By early 2006, Hunter was in his ascendancy within Amaranth and by March 2006, Arora had left Amaranth to work at another hedge fund. It is clear that Arora and Hunter had different views on trading, in particular, trading NG Futures during the settlement period. As do most participants in the NG Futures market, Arora sought to exit his position in the expiring "prompt-month" NG Futures as early as possible to avoid the risks of trading in the settlement.[52] Indeed, Amaranth did not trade large volumes of prompt-month contracts on the settlement day until after Hunter had been made a Co-Portfolio Manager for commodities trading. In the months leading up to Arora's departure, Arora expressed concerns to Amaranth CRO Jones and Maounis about Hunter's natural gas trading.[53] But, Hunter's energy trading book had been "an enormous source of profitability in 2005."[54] Moreover, energy trading accounted for 98 percent of Amaranth's 2005 profits, primarily from natural gas derivatives.[55] Thus it appears Amaranth senior management took a rather hands off approach to overseeing Hunter's trading operation (at least until May 2006). As we will discuss in more detail *infra*, Amaranth senior management's handling of the trading operation factors significantly into our overall view of this matter.

C. Trading in the March, April, and May 2006 NG Futures Contract

41. There are three NG Futures Contracts and their respective settlement days in 2006 – February 24, March 29, and April 26 – that are the subject of this order. The specific manipulative trading activity by Amaranth will be detailed further *infra*, but here it is

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[51] Maounis Dep. 17:22-21:5 (Nov. 20, 2006 morning session).

[52] Arora Dep. 19:20-20:9 (Nov. 14, 2006, afternoon session).

[53] Jones Dep. 38:15-41:4 (Nov. 13, 2006 morning session); Arora Dep. 25:4-29:4 (Nov. 14, 2006 morning session).

[54] Jones Dep. 71:17-20 (Nov. 13, 2006 morning session).

[55] STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS, 110TH CONG., EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET at 58 (2007) (quoting JPMorganChase, CP Leveraged Funds Due Diligence, Annual Review 2005, JPM-PS1 0007051).